FIG.1

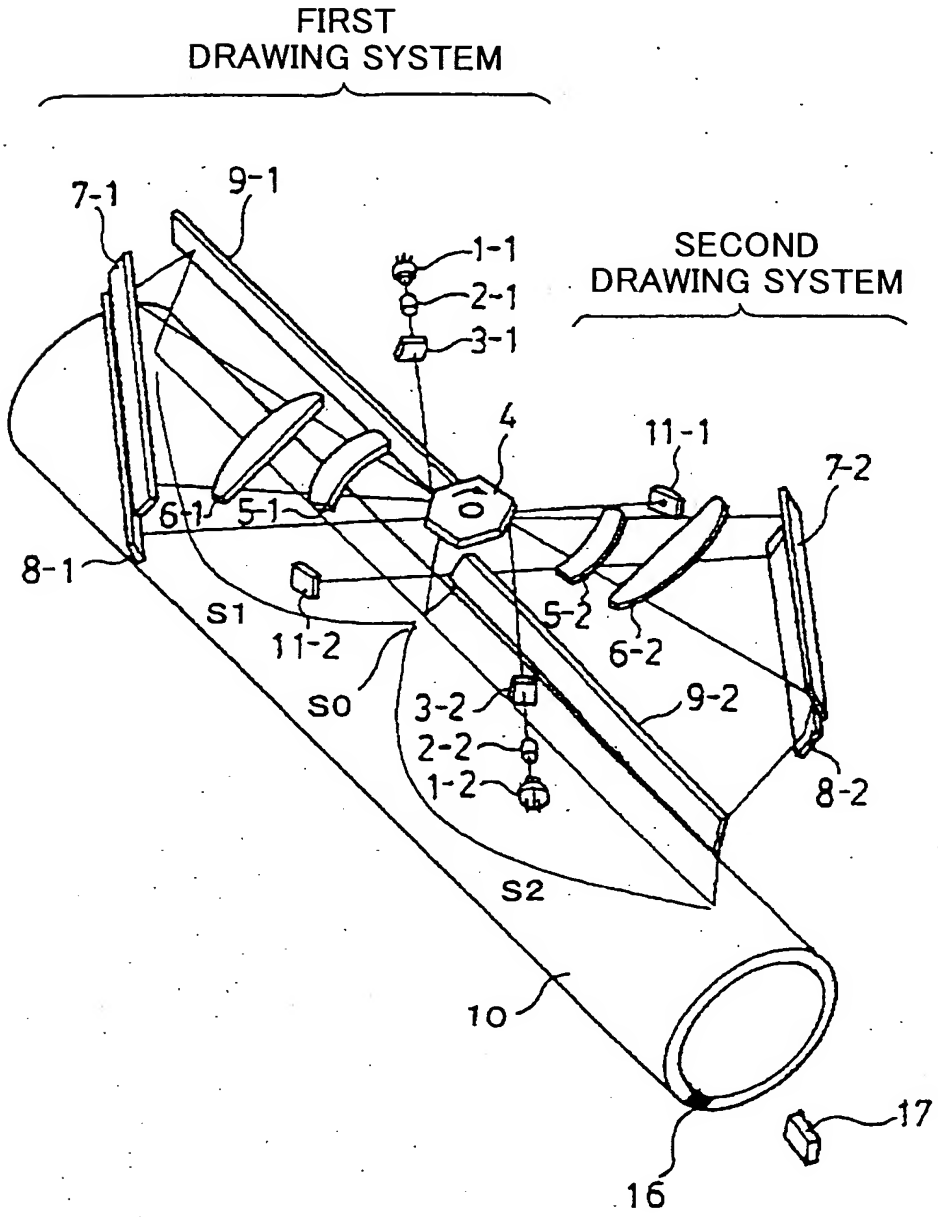

FIRST
DRAWING SYSTEM
SECOND
DRAWING SYSTEM
7-1
9-1
1-1
2-1
3-1
4
11-1
7-2
6-1
5-1
8-1
S1
11-2
5-2
6-2
S0
3-2
9-2
2-2
1-2
8-2
S2
10
17
16

FIG.2A

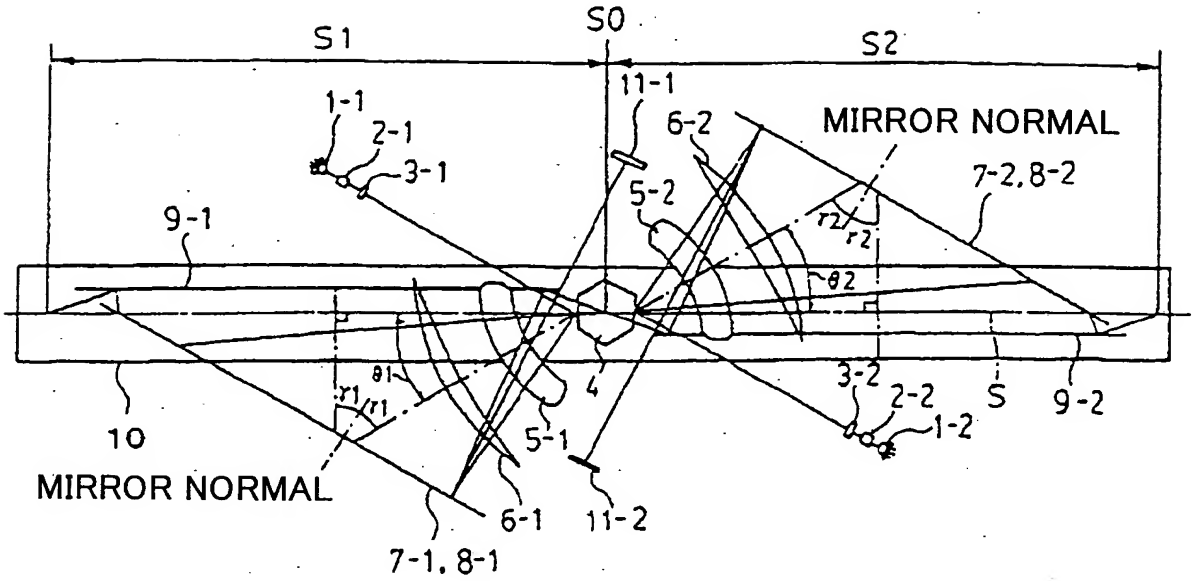


FIG.2B

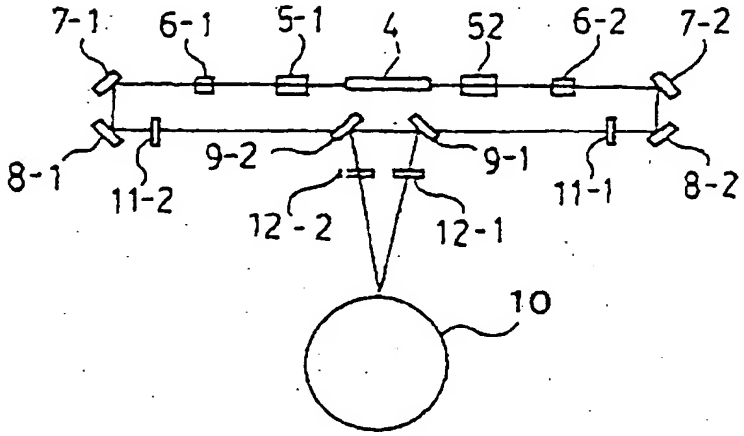


FIG.2C

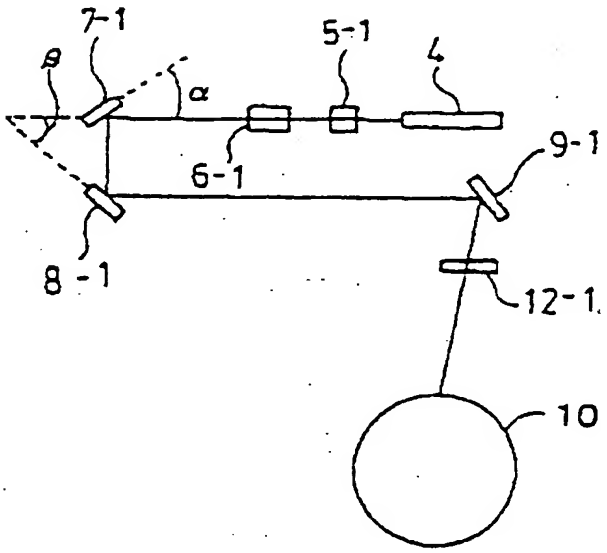


FIG.3

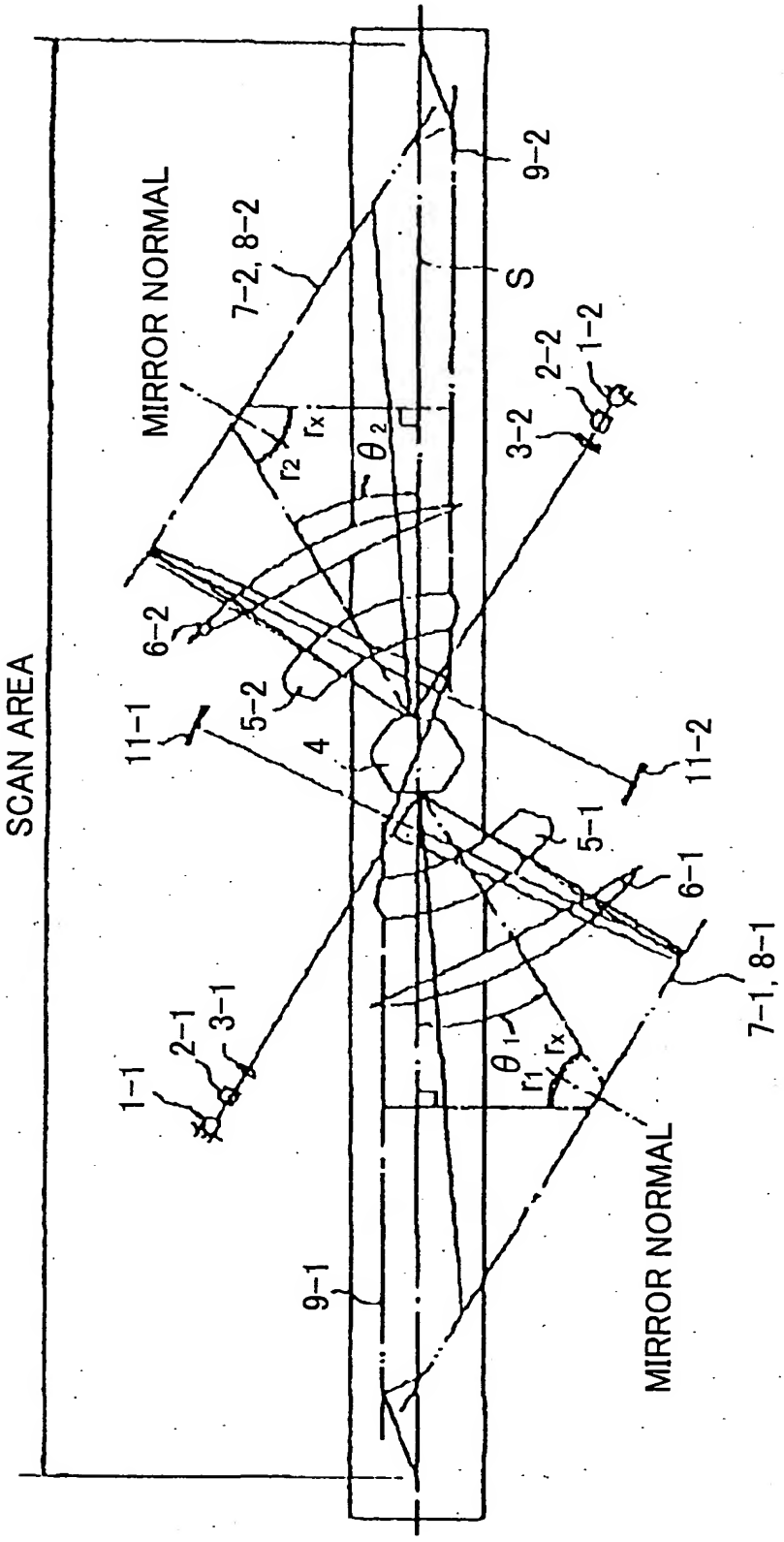

SCAN AREA
MIRROR NORMAL
7-2, 8-2
9-2
S
2-2
1-2
3-2
r2
rx
θ2
6-2
5-2
11-1
4
11-2
5-1
6-1
7-1, 8-1
1-1
2-1
3-1
θ1
r1
rx
MIRROR NORMAL
9-1

FIG.4

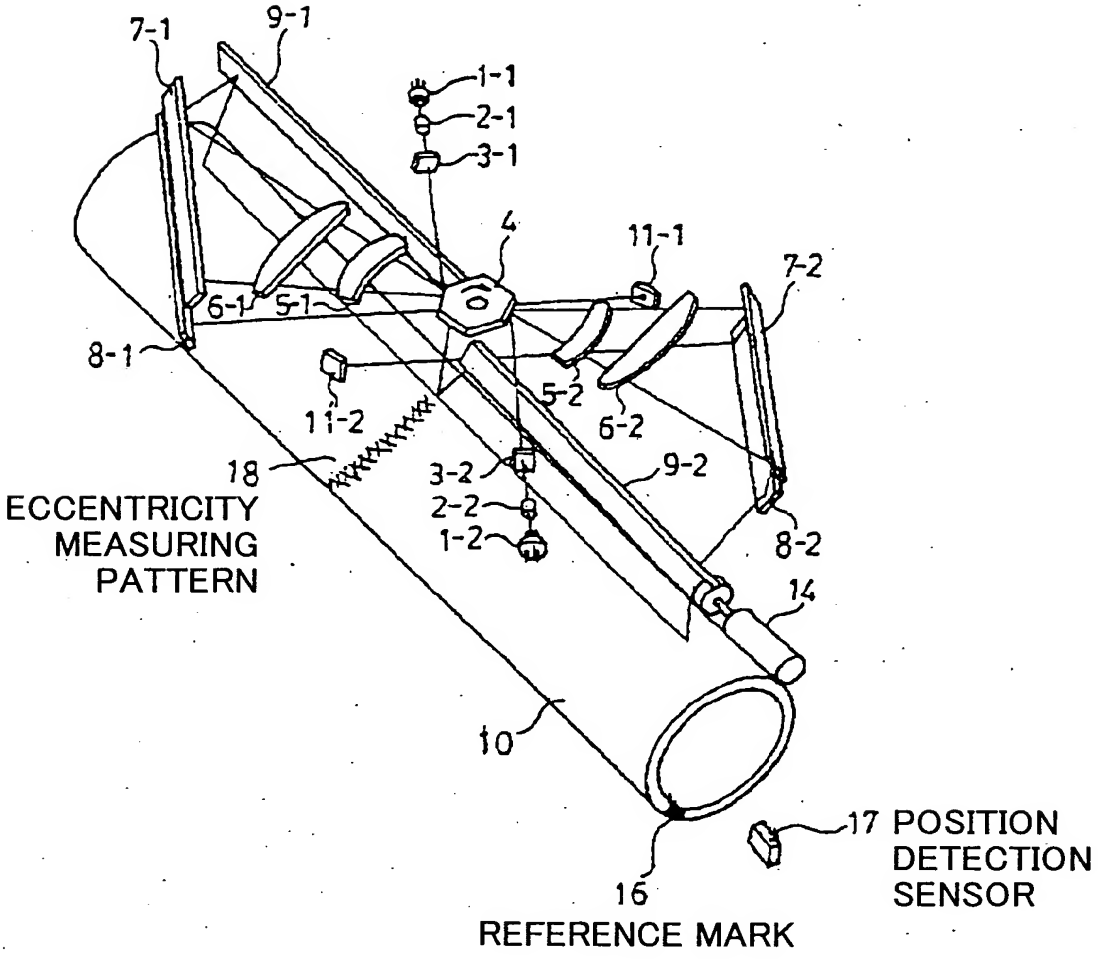

7-1
9-1
1-1
2-1
3-1
4
11-1
7-2
6-1
5-1
8-1
11-2
5-2
6-2
18
3-2
9-2
2-2
1-2
8-2
ECCENTRICITY MEASURING PATTERN
14
10
17 POSITION DETECTION SENSOR
16
REFERENCE MARK

FIG.5

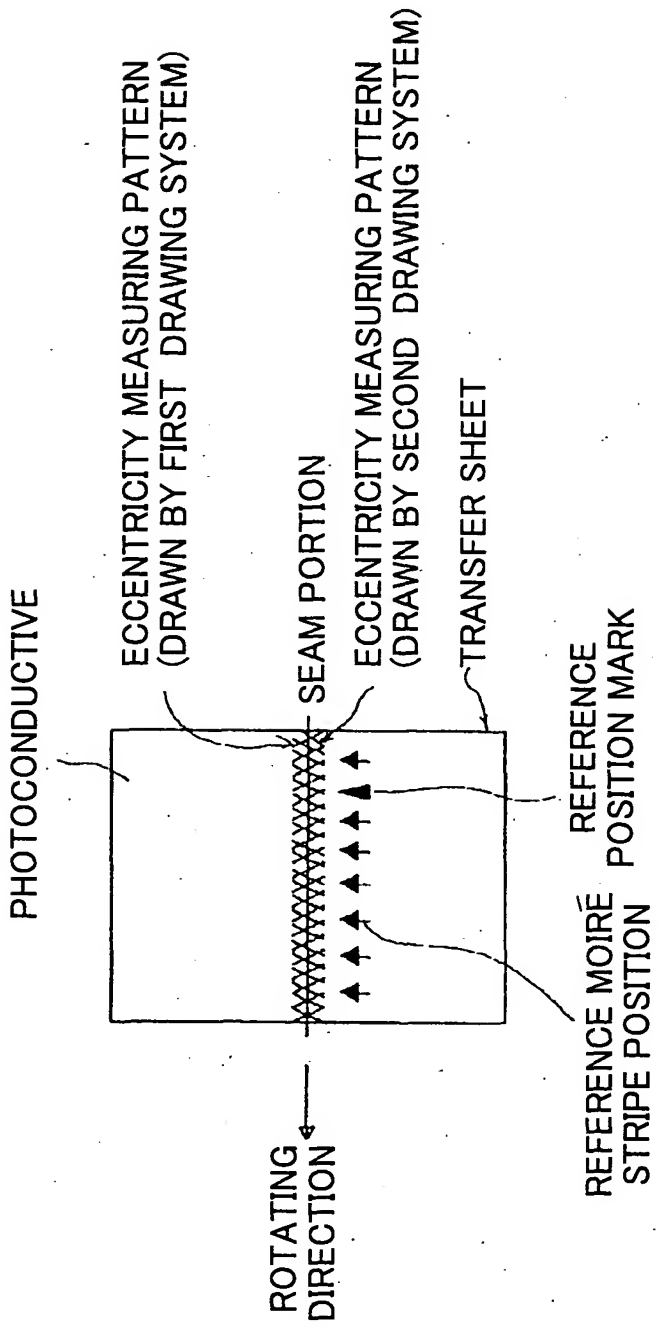

PHOTOCONDUCTIVE
ECCENTRICITY MEASURING PATTERN (DRAWN BY FIRST DRAWING SYSTEM)
SEAM PORTION
ECCENTRICITY MEASURING PATTERN (DRAWN BY SECOND DRAWING SYSTEM)
TRANSFER SHEET
REFERENCE POSITION MARK
REFERENCE MOIRÉ STRIPE POSITION
ROTATING DIRECTION

FIG.6

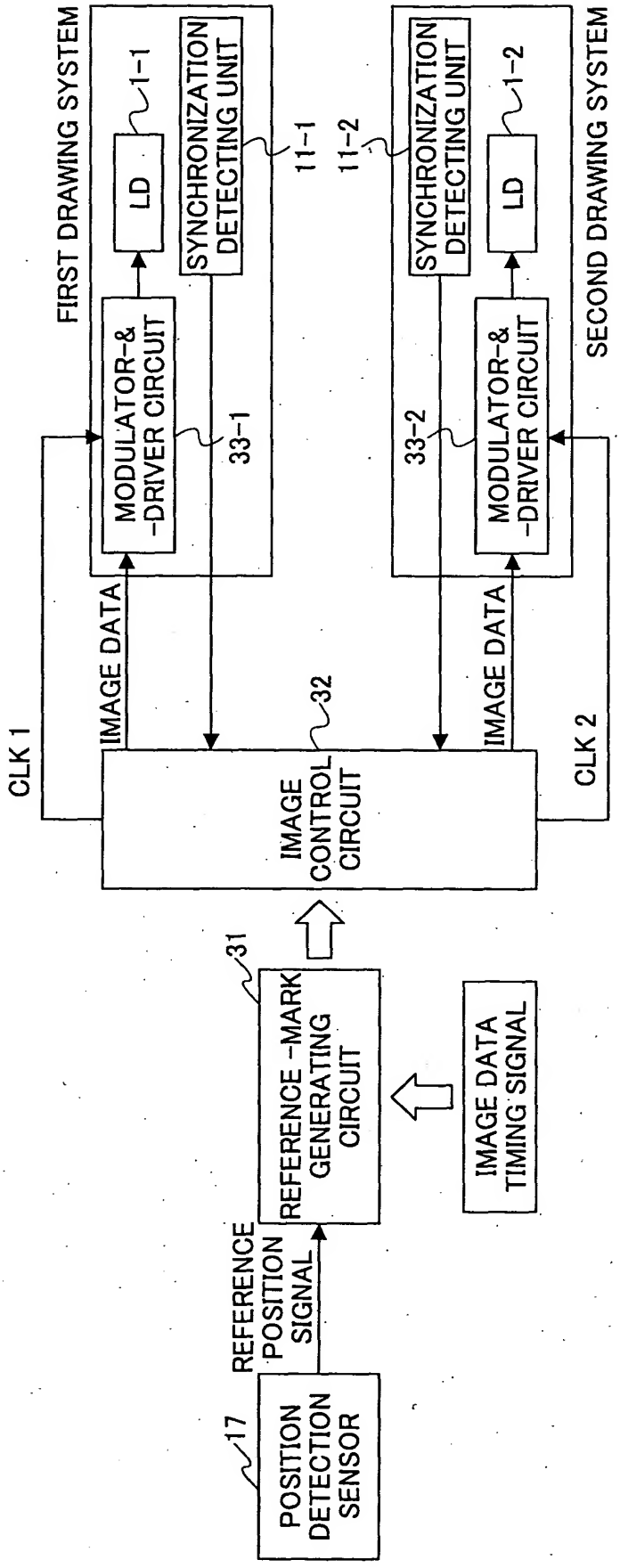

FIRST DRAWING SYSTEM
SECOND DRAWING SYSTEM
LD
1-1
1-2
SYNCHRONIZATION DETECTING UNIT
11-1
11-2
MODULATOR-& -DRIVER CIRCUIT
33-1
33-2
IMAGE DATA
CLK 1
CLK 2
32
IMAGE CONTROL CIRCUIT
31
REFERENCE -MARK GENERATING CIRCUIT
IMAGE DATA TIMING SIGNAL
REFERENCE POSITION SIGNAL
17
POSITION DETECTION SENSOR

FIG.7

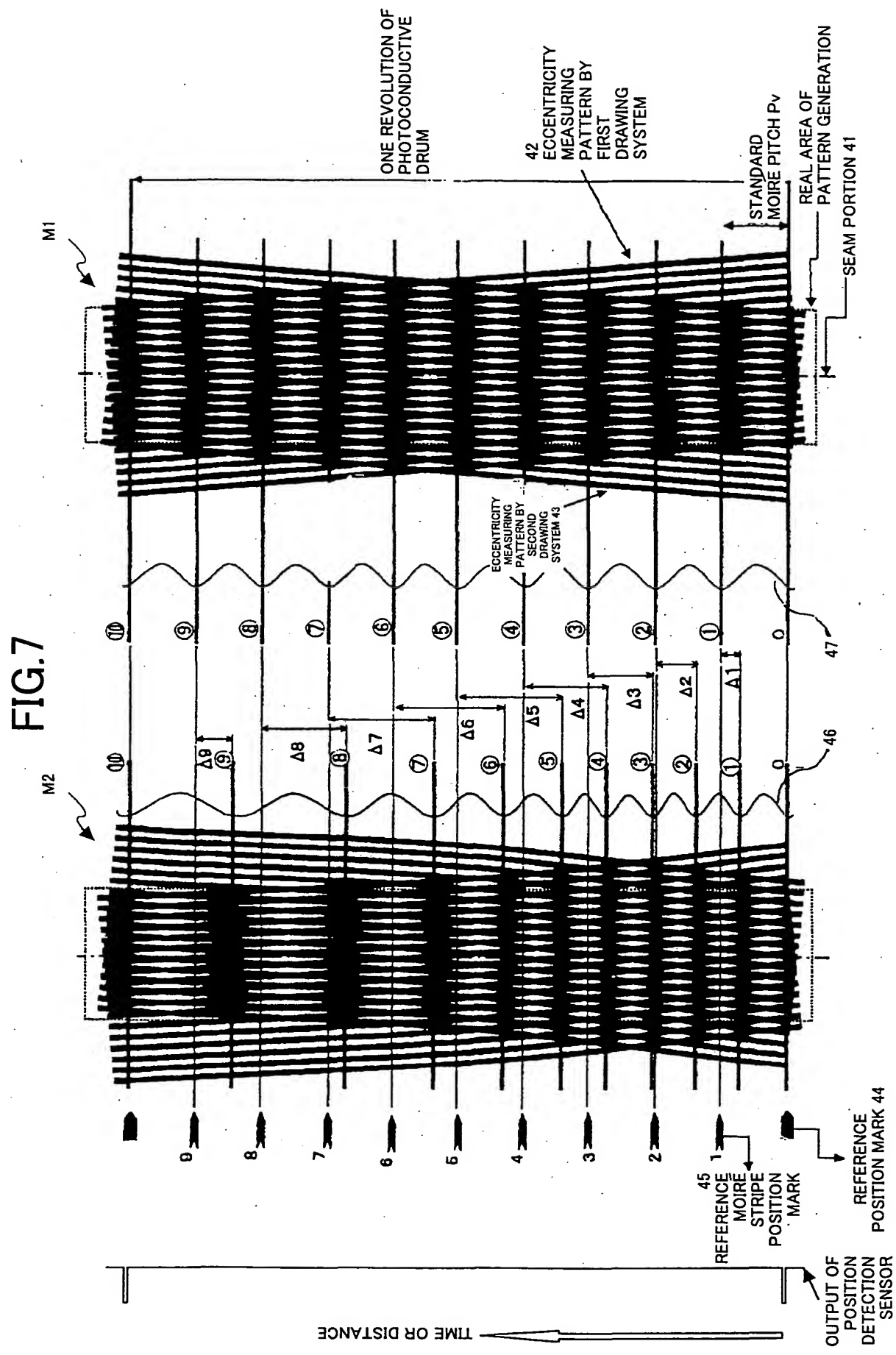

ONE REVOLUTION OF PHOTOCONDUCTIVE DRUM
42 ECCENTRICITY MEASURING PATTERN BY FIRST DRAWING SYSTEM
STANDARD MOIRE PITCH Pv
REAL AREA OF PATTERN GENERATION
SEAM PORTION 41
M1
M2
ECCENTRICITY MEASURING PATTERN BY SECOND DRAWING SYSTEM 43
Δ1
Δ2
Δ3
Δ4
Δ5
Δ6
Δ7
Δ8
Δ9
47
46
45 REFERENCE MOIRE STRIPE POSITION MARK
REFERENCE POSITION MARK 44
OUTPUT OF POSITION DETECTION SENSOR
TIME OR DISTANCE

FIG.8

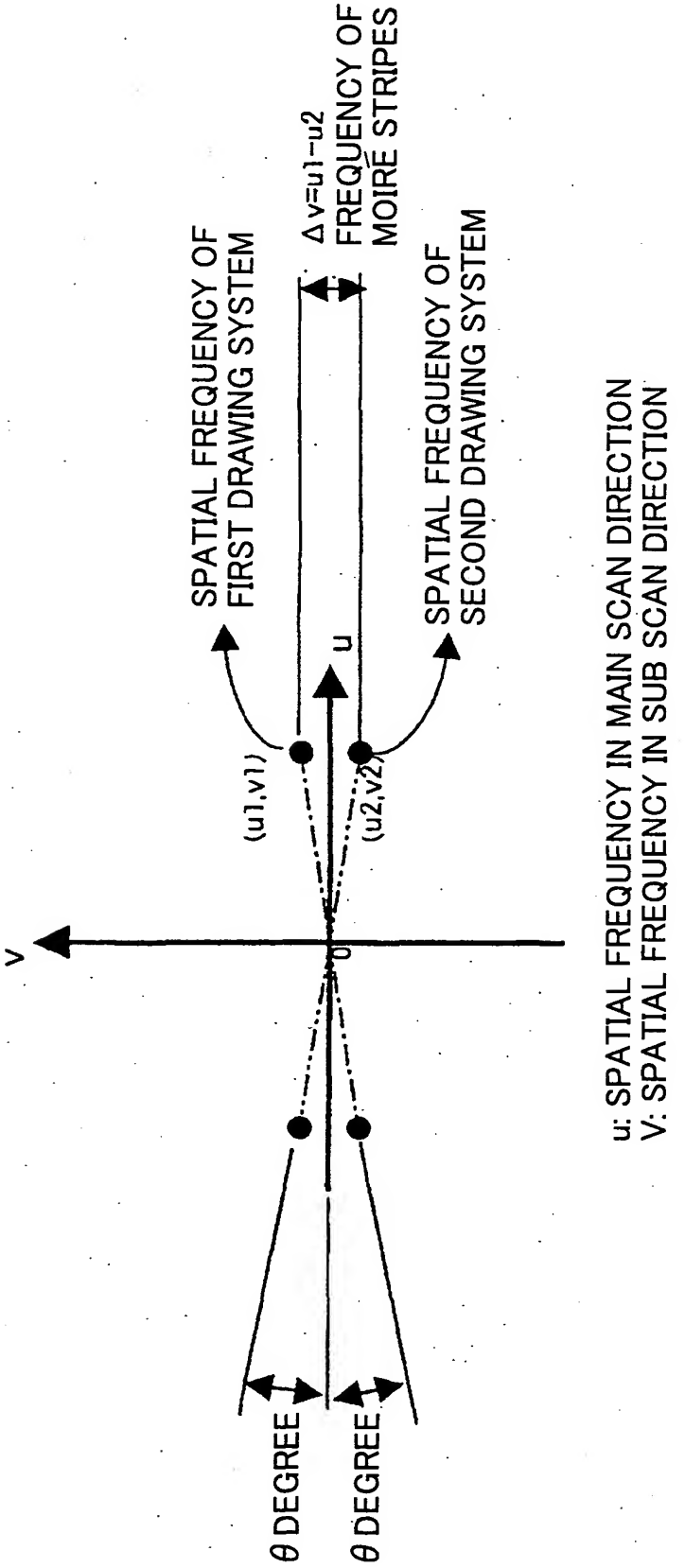

SPATIAL FREQUENCY OF FIRST DRAWING SYSTEM
Δv=u1-u2
FREQUENCY OF MOIRÉ STRIPES
SPATIAL FREQUENCY OF SECOND DRAWING SYSTEM
u
(u1,v1)
(u2,v2)
v
0
θ DEGREE
θ DEGREE
u: SPATIAL FREQUENCY IN MAIN SCAN DIRECTION
V: SPATIAL FREQUENCY IN SUB SCAN DIRECTION

FIG.9

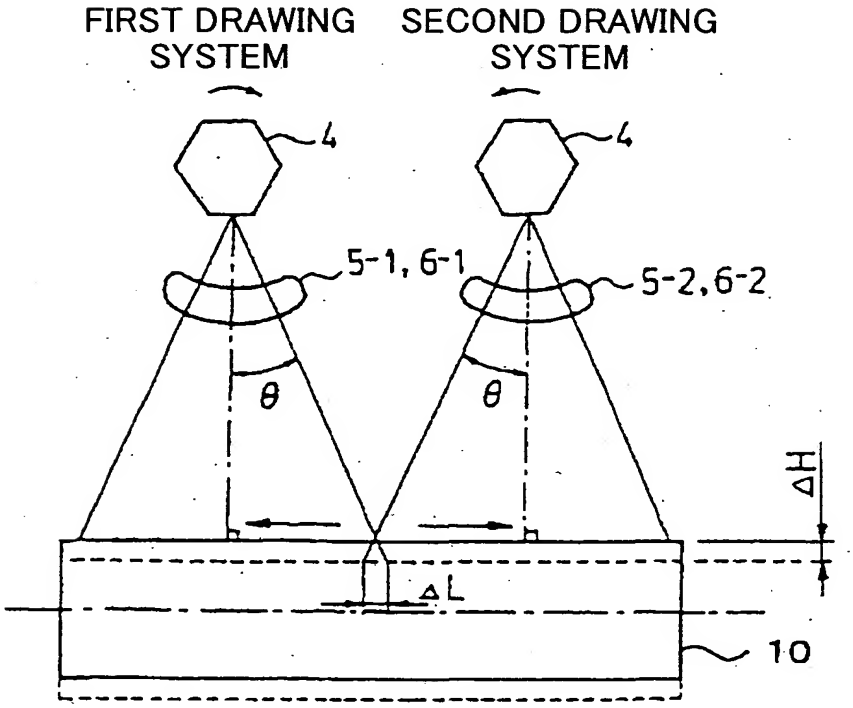
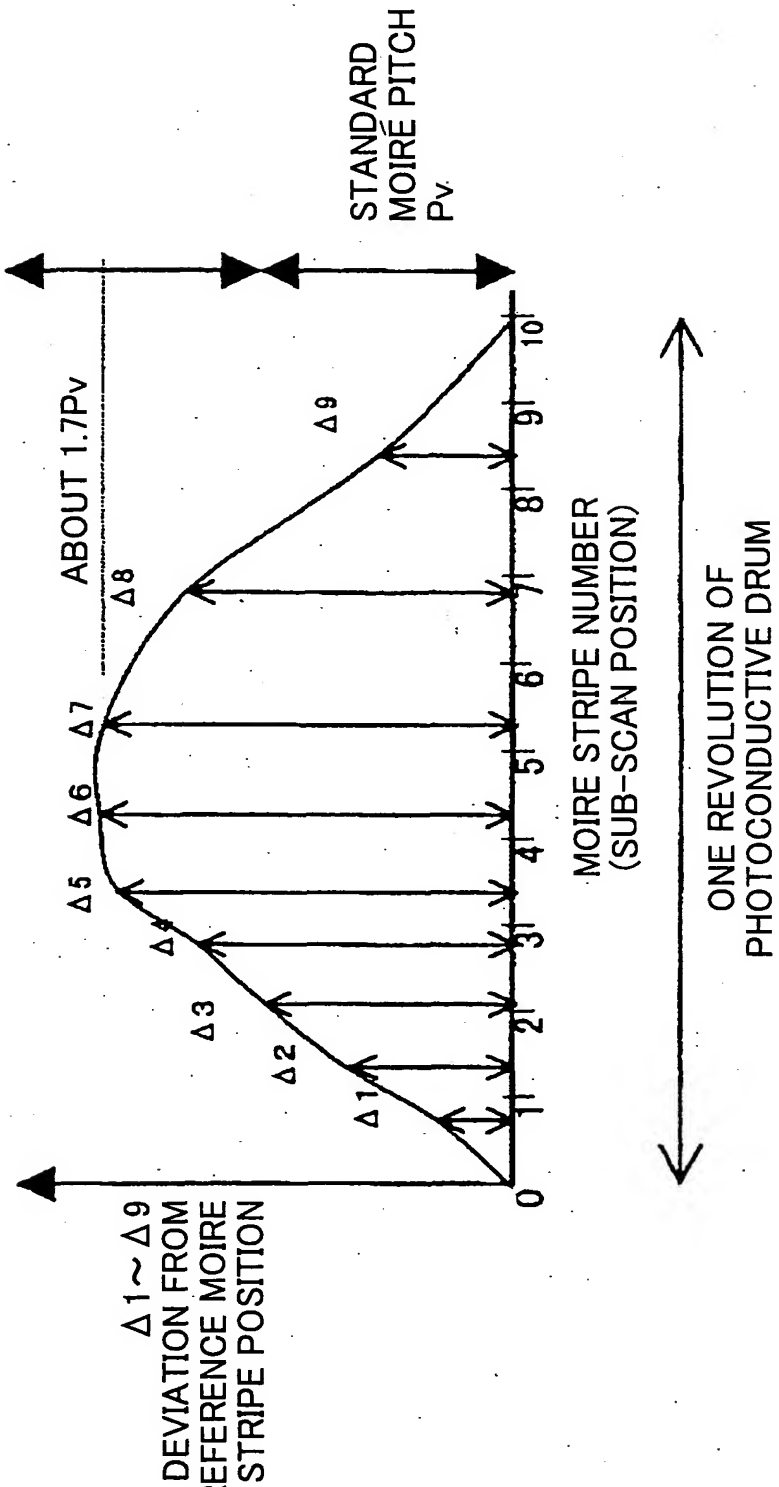

FIRST DRAWING SYSTEM
SECOND DRAWING SYSTEM
4
4
5-1, 6-1
5-2, 6-2
θ
θ
ΔH
ΔL
10

FIG.10


STANDARD MOIRE PITCH Pv
ABOUT 1.7Pv
Δ1~Δ9 DEVIATION FROM REFERENCE MOIRE STRIPE POSITION
MOIRE STRIPE NUMBER (SUB-SCAN POSITION)
ONE REVOLUTION OF PHOTOCONDUCTIVE DRUM
0
1
2
3
4
5
6
7
8
9
10
Δ1
Δ2
Δ3
Δ4
Δ5
Δ6
Δ7
Δ8
Δ9

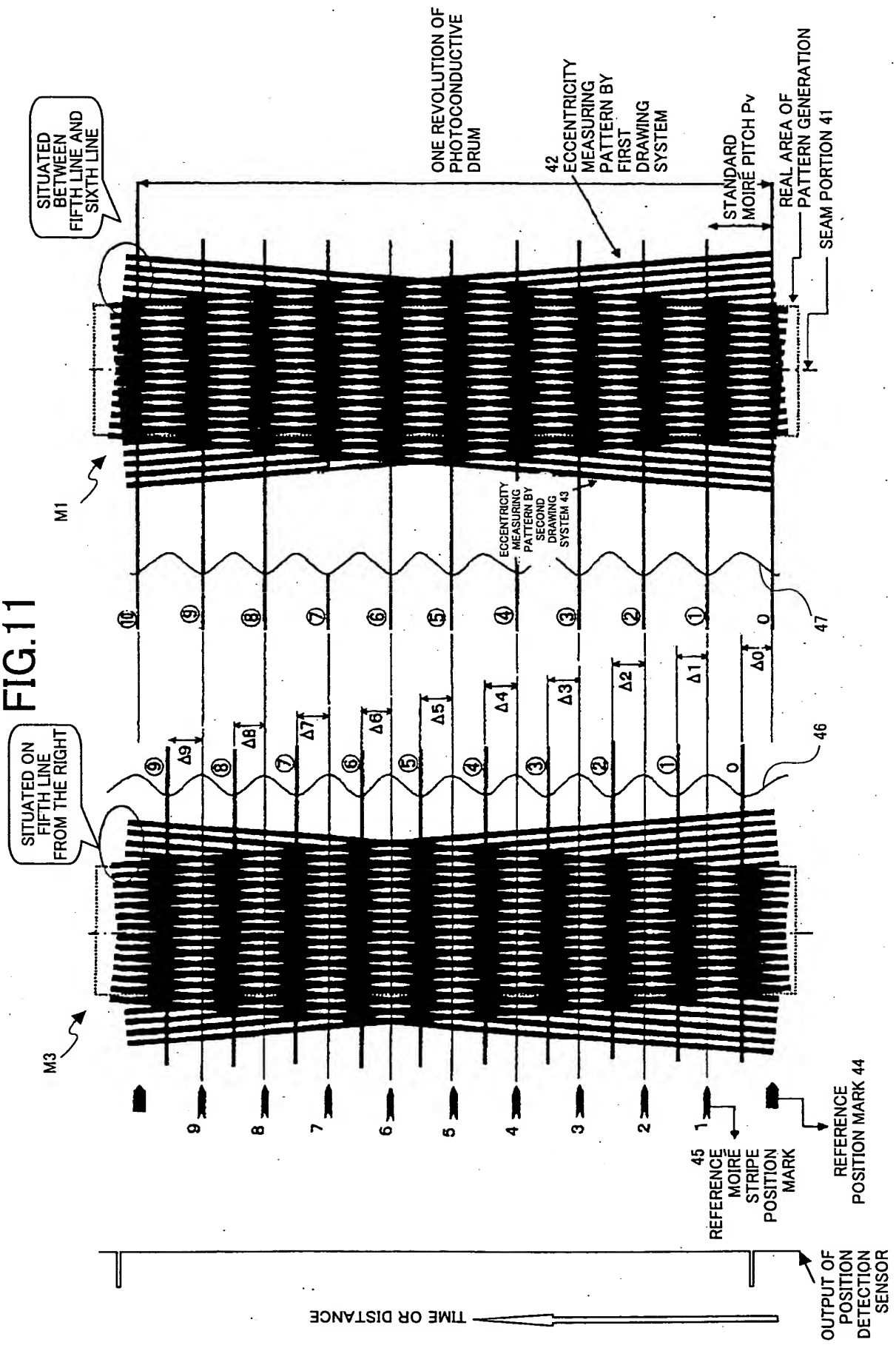

ONE REVOLUTION OF PHOTOCONDUCTIVE DRUM
42 ECCENTRICITY MEASURING PATTERN BY FIRST DRAWING SYSTEM
STANDARD MOIRE PITCH Pv
REAL AREA OF PATTERN GENERATION
SEAM PORTION 41
SITUATED BETWEEN FIFTH LINE AND SIXTH LINE
SITUATED ON FIFTH LINE FROM THE RIGHT
M1
M3
ECCENTRICITY MEASURING PATTERN BY SECOND DRAWING SYSTEM 43
47
46
Δ0
Δ1
Δ2
Δ3
Δ4
Δ5
Δ6
Δ7
Δ8
Δ9
45 REFERENCE MOIRE STRIPE POSITION MARK
REFERENCE POSITION MARK 44
OUTPUT OF POSITION DETECTION SENSOR
TIME OR DISTANCE

FIG.11

FIG.12

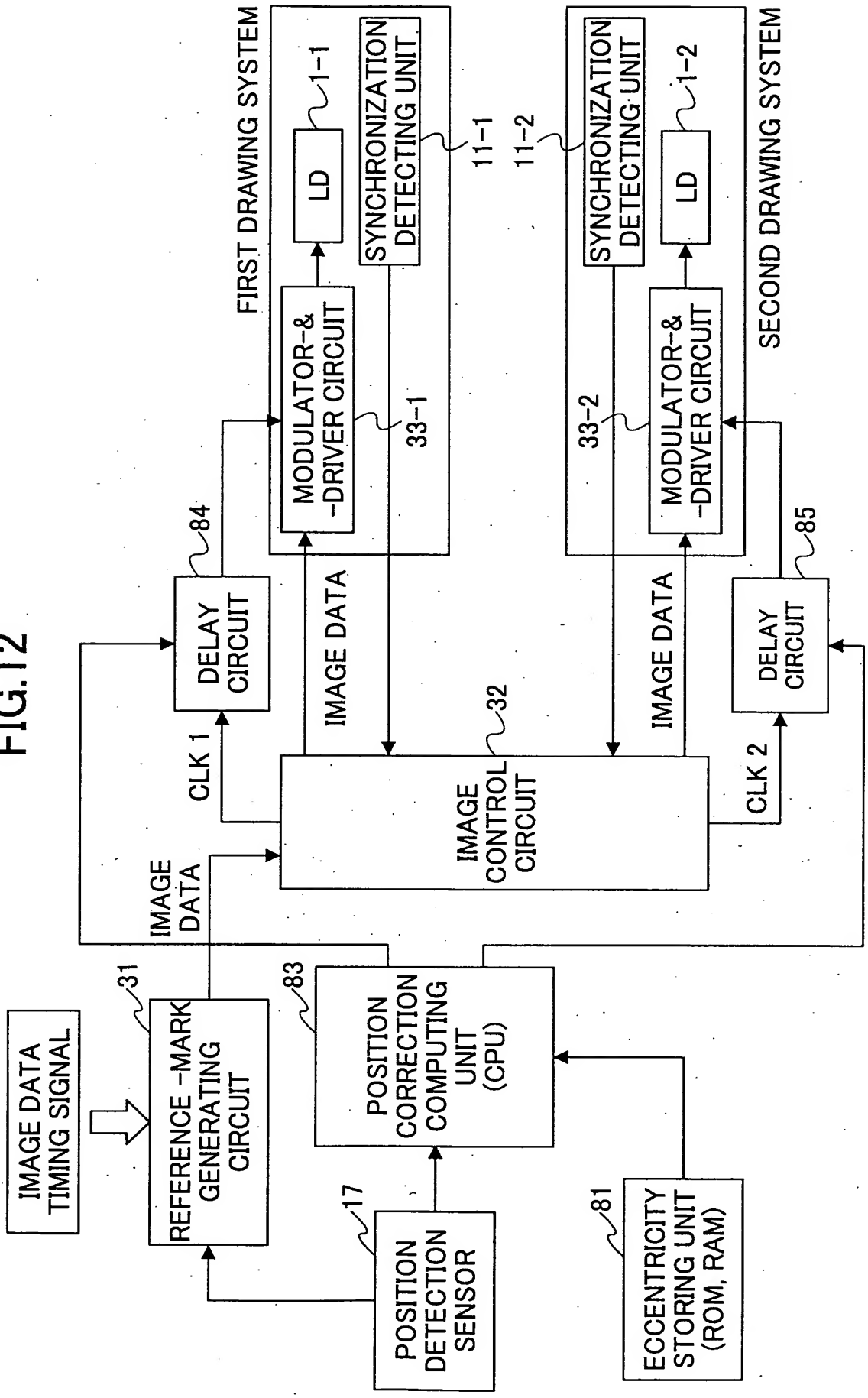


IMAGE DATA TIMING SIGNAL
REFERENCE -MARK GENERATING CIRCUIT
31
POSITION DETECTION SENSOR
17
POSITION CORRECTION COMPUTING UNIT (CPU)
83
ECCENTRICITY STORING UNIT (ROM, RAM)
81
IMAGE DATA
IMAGE CONTROL CIRCUIT
32
CLK 1
CLK 2
DELAY CIRCUIT
84
DELAY CIRCUIT
85
IMAGE DATA
IMAGE DATA
FIRST DRAWING SYSTEM
MODULATOR-& -DRIVER CIRCUIT
33-1
LD
1-1
SYNCHRONIZATION DETECTING UNIT
11-1
SECOND DRAWING SYSTEM
MODULATOR-& -DRIVER CIRCUIT
33-2
LD
1-2
SYNCHRONIZATION DETECTING UNIT
11-2

FIG.13

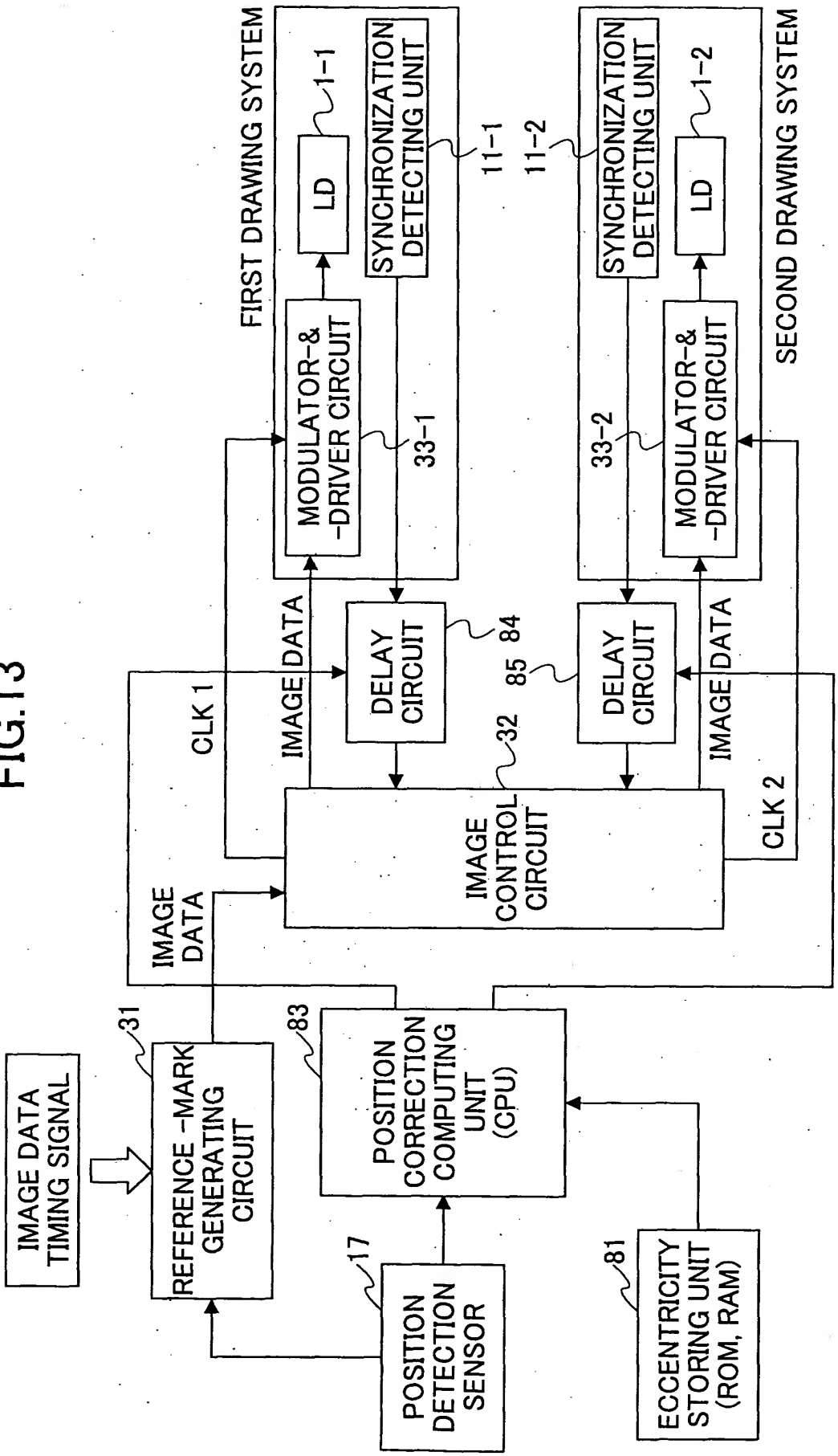


IMAGE DATA TIMING SIGNAL
REFERENCE -MARK GENERATING CIRCUIT
31
POSITION DETECTION SENSOR
17
POSITION CORRECTION COMPUTING UNIT (CPU)
83
ECCENTRICITY STORING UNIT (ROM, RAM)
81
IMAGE DATA
CLK 1
IMAGE CONTROL CIRCUIT
32
CLK 2
IMAGE DATA
IMAGE DATA
DELAY CIRCUIT
84
DELAY CIRCUIT
85
IMAGE DATA
FIRST DRAWING SYSTEM
MODULATOR-& -DRIVER CIRCUIT
33-1
SYNCHRONIZATION DETECTING UNIT
11-1
LD
1-1
SECOND DRAWING SYSTEM
MODULATOR-& -DRIVER CIRCUIT
33-2
SYNCHRONIZATION DETECTING UNIT
11-2
LD
1-2

FIG.14

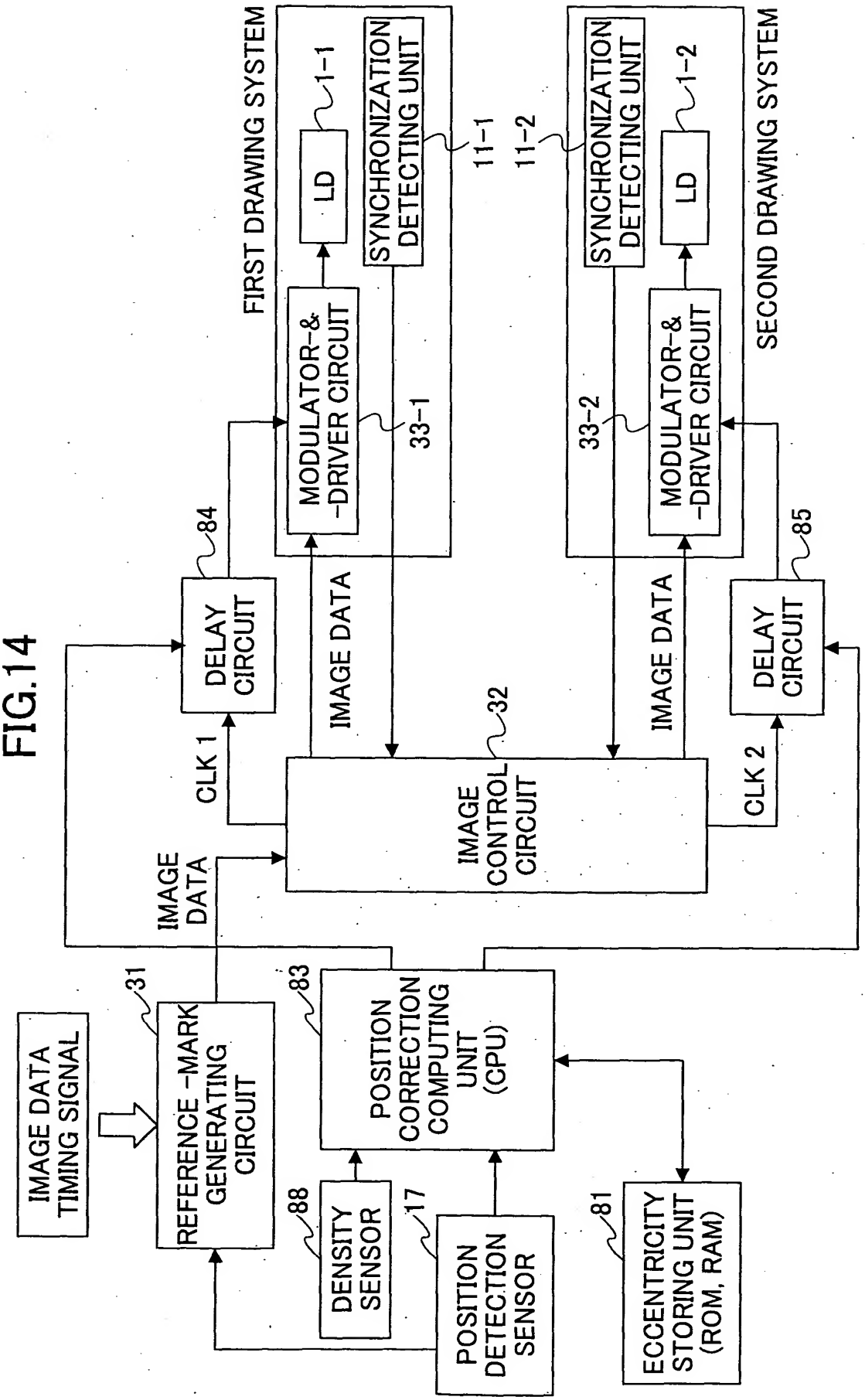


IMAGE DATA TIMING SIGNAL
REFERENCE -MARK GENERATING CIRCUIT
31
POSITION CORRECTION COMPUTING UNIT (CPU)
83
DENSITY SENSOR
88
POSITION DETECTION SENSOR
17
ECCENTRICITY STORING UNIT (ROM, RAM)
81
IMAGE DATA
IMAGE CONTROL CIRCUIT
32
CLK 1
CLK 2
DELAY CIRCUIT
84
DELAY CIRCUIT
85
IMAGE DATA
IMAGE DATA
FIRST DRAWING SYSTEM
MODULATOR-& -DRIVER CIRCUIT
33-1
LD
1-1
SYNCHRONIZATION DETECTING UNIT
11-1
SECOND DRAWING SYSTEM
MODULATOR-& -DRIVER CIRCUIT
33-2
LD
1-2
SYNCHRONIZATION DETECTING UNIT
11-2